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Formulaic Sequences: Importance to Academic English Writing

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Abstract

Formulaic sequences are considered the building blocks of academic writing. Sound L2 teaching methodology indicates that to increase learners' proficiency and performance in academic writing contexts they be taught formulaic sequences in the writing classroom. Since academic English writing is a formulaic paradigm as opposed to a creative one, the teaching of formulaic sequences as they feature in academic writing discourse, in combination with taxonomy sets, is posited as pedagogic, and therefore beneficial to learners. Further, over usage of non-academic and under usage of academic formulaic sequences should be mitigated. However, the empirical research which informs formulaic sequence taxonomy development hampers classroom adoption due to multiple challenges. More consensus on the pedagogic practice of teaching formulaic sequences in the classroom needs to evolve. When empirical research in this field of formulaic sequences becomes more widespread, comprehensive formulaic sequence taxonomies can be achieved. Utilizing such tools in L2 teaching methodology will help teachers and learners better navigate English academic writing.

Key words: formulaic sequences, L2, academic English writing, teaching methodology, taxonomies

Introduction

This paper focusses on a review of the empirical research into the acquisition of formulaic sequences for English academic writing proficiencies. The importance of formulaic sequences will be highlighted for the academic English writing field and their interdependence with writing performance will be discussed. Such a writing paradigm therefore supports a methodology of teacher input of these formlaic sequences. Without this input, students display poor performance in the academic English writing discipline. At this stage, this field of research exhibits variability in terms of teaching methodology and empirical research to support the pedagogy. The author explores these variations and demonstrates how they challenge the field. Overcoming these challenges will facilitate further development of the field that would be beneficial to L2 learners of academic English writing. A sound pedagogy for formulaic sequences could be cultivated if there was less variation in collated empirical data featured in the current taxonomy lists and corpora. The first step is to achieve more consistency in methodology, and from there, a platform can be established in order to address these challenges. In short, this paper focusses on the initial stage of teaching methodology for formulaic sequences, and indicates how important it is for such common foundations of formulaic sequences to be laid by teachers in order to improve L2 learners' proficient performance in academic English writing.

1. Literature Review

1.1 Academic English Writing and Formulaic Sequences

Being universally accepted, especially in academic environments, as a challenging and complex activity, writing is particularly demanding for second language learners (L2) (Bacha, 2002; Cook & Bassetti, 2005; Silva, 1993 cited by Wood, 2015). It also has been considered as an engine for second (and first) language acquisition (Wood, 2015). For second language learners, the act of writing gives learners the chance to strengthen and broaden their linguistic repertoire while putting into practice and employing the required syntax and vocabulary of the target language. Yet the knowledge of advanced grammar, vocabulary and grammatically correct sentences does not equate to logical and coherent academic texts (Ellis & Sheen, 2008). That is, in academic genres, formulaic sequences display a higher frequency than in non-academic genres (Biber et al., 1999; Hyland, 2008; Simpson-Vlach & Ellis, 2010; Wood, 2015). In fact, four-word sequences appear in academic writing over 5000 times per million occurrences (Biber et al., 1999). From a Second Language Acquisition (SLA) perspective, the retrieval of formulaic sequences as wholes from the memory is requisite (Ding, 2007; Wood, 2015; Wood, 2006; Wray, 2002). Moreover, these formulaic sequences can constitute up to 52.3% of written discourse (Erman & Warren, 2000; Al Hassan & Wood, 2015). Therefore, academic writing skills surpass lexicon and syntax mastery, and successful implantation of formulaic sequences are the building blocks of academic texts, and the foundation for academic writing success (Corson, 1995; Coxhead & Byrd, 2007; Martinez & Schmitt, 2012; Al Hassan & Wood, 2015; Biber, 2006).

Further to the above, it is demanding for learners to perform in writing at the level acceptable to native users when they cannot control an appropriate range of formulaic sequences (Cowie, 1992; Wood, 2015). A study by Cowie (1992; Wood, 2015) stated the following with reference to newspaper usage in classrooms:

> Clearly, the sheer density of ready-made units [formulaic sequences] in various types of written text is a fact that any approach to the teaching of writing to foreign students has to come to terms with. It is impossible to perform at a level acceptable to native users, in writing or speech, without controlling an appropriate range of multiword units [formulaic sequences]. (p. 10)

Additionally, when a certain range of formulaic sequences are absent in academic English writing, it marks low proficiency, nonnative-like, novice or inadequate writer proficiency (Hyland, 2008; Li & Schmitt, 2009; Wood, 2015). Since for academic writing, even if it is grammatically correct, it can be unnatural, and judged as awkward, or foreign writing (Li & Schmitt, 2009) which leads to the writer being labelled as an outsider (Handl, 2008; Wood, 2015). Wood (2015) posits that this is attributed to a lack of awareness on the part of second language

learners of formulaic language that is specific to academic disciplines. Nonnative-like unconventionality in second language writing stems from the overuse of a limited number of non-academic English formulaic sequences and the underuse of a whole set of academic formulaic sequences (Paquot, 2008; Wood, 2015). While the learner strategy may be to avoid grammatical errors, this practice leads to weak and repetitive writing (Granger, 1998; Wood, 2015; Hyland, 2008).

As expected, mastery of the formal nature of academic English writing is difficult for learners who struggle with expressing complex ideas. They fear that their writing skills are underdeveloped due to their perceived or actual inabilities associated with writing. Only highly proficient learners have the tendency to be able to select the most appropriate formulaic sequences in their language production and disregard other possible grammatical expressions, which may be equally useful for the expression of the same concept (Wood, 2015). This is highly challenging for second language learners who are merely struggling to learn various aspects of language use and knowledge at the same time (Wood, 2015). It is also important to note that academic writing operates within a paradigm. This paradigm is set against creative or purely communicative writing ones since academic prose is characterized by the nature of its restrictions and its formality (Wood, 2015). For example, in poetry, the writer is successful if their writing can juxtapose ideas that are entirely novel, unfamiliar, and are considered fresh utterances (Jones & Haywood, 2004; Al Hassan & Wood, 2015; Simpson-Vlach & Ellis, 2010). Whereas academic writing is not entirely creative, nor composed from scratch each time that it is produced (Barlow, 2000; Pawley & Syder, 1983; Al Hassan & Wood, 2015; Wray, 2002; Wood, 2002). Rather it is formulaic and idiomatic (Boers et al., 2006; Lewis, 1997; Al Hassan and Wood, 2015).

This is further expounded in the assigned writing tasks affecting the use of idiosyncratic cohesive devices, word choice, and in the end, the writers' overall performance (Reid, 1990; Wood, 2002). To exemplify, understanding the deviations from novice writer norms to academic norms, for example, *next* (novice) vis-à-vis *followed by* (academic), or *I'll talk about* (novice) vis-à-vis *The data suggests that* (academic) is essential. If novice writers are not taught the distinction, there are evaluation implications for their success in an academic environment (Wood, 2015). That is, L2 learners should be skilled in the proficient use of formulaic sequences (Wood, 2015). In addition, for proficient and learner writers alike, formulaic expressions need to be implemented in the particular register of study (Lewis, 1997; Martinez & Schmitt, 2012; Al Hassan & Wood, 2015; Simpson-Vlach & Ellis, 2010).

Thus, as well as being the building blocks, formulaic sequences in academic writing provide cohesion, create structure for the rhetoric and allow for concepts to be expressed in a formulaic

manner which are indicative of the target academic genre (Wood, 2002). If these formulaic sequences of complex and varied structures and functions are not mastered, coherent and developed pieces of academic writing cannot be constructed (Wood, 2015). Therefore, the teacher's successful input to and interaction with the L2 learners in the writing class in terms of the formulaic sequences relevant to particular genres, topics and task types are considered highly important. If not, a great degree of variation could occur among learners. It is thus logical that mastery of formulaic sequences is important for academic English writing. Whereby specific sets of formulaic sequences, and associated high frequency, which are task or discipline dependent, inform this proficiency (Ellis & Sheen, 2008).

In sum, formulaic sequences should function to do the following in academic writing:

1. Offer ready-made sets of words, which constitute a partial foundation for creating academic style prose;
2. Facilitate and represent fluent language use, which signals that the writer is a member of a specific discourse community;
3. Represent register-specific methods of expression, which express particular meanings (Coxhead & Byrd, 2007; Wood, 2015).

2. Challenges of Formulaic Sequences in Academic Writing: Empirical Research

2.1 Incorporating formulaic teaching of academic English writing into programs: Disparity in the literature

When academic English writing programs are designed to incorporate teaching methodology for formulaic sequences, learners have a heightened awareness of and develop a better ability to control a large number of them (Jones & Haywood, 2004; Wood, 2015). However, when referring to the literature there is disparity with respect to the instructional methodology. A review of the literature, as outlined in Table 1, highlights the various perspectives from which research into formulaic sequences and academic English writing has been conducted. In Table 1, a number of learner corpora studies have been summarized by Wood (2015) and indicate how incongruent empirical research outcomes are. Particularly in terms of poorly targeted instruction and second language learner difficulties (Table 1, Part 1), and differences in L2 English, including dissimilar proficiencies (Table 1, Part 2). This lack of uniformity makes it difficult for teachers to reference since there is not a pedagogic foundation from which further development of the field of both instructional and empirical perspectives can be made. Nonetheless, recognizing this disparity in the literature in terms of formulaic sequence teaching methodology in L2 learner environments is considered a step to advancing the field. In addition to diverse approaches to teaching, there is sizable variety across taxonomy lists of formulaic sequences developed for academic English writing.

Table 1. *Research in EAP Formulaic Sequences* (Wood, 2015, pp. 106–108)

Study	Research outcomes
Part 1. Studies which identified second language user difficulties, and where language instruction could be more appropriately targeted to help students:	
Levy (2003)	- Proficient post-secondary writers used lexical bundles for discourse organization (e. g. *on the other hand*, *at the same time*) more often than less proficient writers
Connor (1990); Ferris (1994)	- More proficient second language writers usually use more prepositional phrases, passives and nominal forms
Boers et al. (2006)	- Targeted instruction of formulaic language linked to greater perceived proficiency by external judges
Al Hassan and Wood (2015)	- Explicit teaching of formulaic sequences to describe a line graph showed a significant increase in the use of appropriate formulaic sequences and blind judges gave higher ratings to the writing in the post and delayed post test
Part 2. Studies which focused on differences among L2 English uses of differing levels of proficiency:	
Appel and Wood (2016)	- Utilised a corpus of graded test taker writing (source: Canadian Academic English Language Assessment (CAEL)) to identify the use of recurrent word combinations: differences between high and low level English L2 writers
Chen and Baker (2010)	- Student writers used more discourse organizing bundles whereas, published work had a high proportion of referential bundles - Student writers overused a number of bundles relatively infrequent in published work - Published work showed a larger range of lexical bundles
Cortes (2004)	- Types of bundles used differed between student and published writers
Biber, Johansson, Leech, Conrad and Finegan (1999)	- Lower level writers use more stance and discourse organizing types of combinations - Higher level writers were less dependent on copying chunks verbatim from source reading texts for their essay writing and used more referential word combinations than lower level writers
Appel and Wood (2016); Staples, Egbert, Biber and McClair (2013); Biber et al. (1999)	- In examination of the TOEFL writing section, three proficiency levels were studied: higher level writers used fewer prompts from the writing tasks than the lower level writers
Adel and Erman (2012)	- English writing lexical bundles were compared in a large corpus of British university students, and advanced Swedish learners of English: showing that native speakers used a greater range of bundles and used more hedging and softening positions

2.2 Formulaic sequence taxonomy challenges: Empirical classifications and variations of formulaic sequences in academic English writing disciplines

Even though taxonomies have contributed to the field of formulaic sequence research, there is no widely accepted taxonomy among researchers of the community in academic English writing. Given this, there is no consensus among researchers in the field. Although Hyland's (1998) well-established taxonomy is often cited, Siepmann (2005) raised concerns about this taxonomy by juxtaposing it against other researchers in the field with regard to how they classified formulaic sequences. For instance, Hyland has separately categorized the formulaic sequence of *In addition* as Textual Metadiscourse and sub-categorised it as a Logical Connective. Whereas three other researchers, Vande Kopple (1985), Hutz (1997) and Fraser (1998) have all dissimilarly categorized *In addition* as Text Connective (Vande Kopple), Causality and Result, Exemplification, and Addition, (Hutz) and Message Relationship Markers (Fraser). This clearly indicates the variety of classifications and categorizations that exist in the literature of formulaic sequences. Siepmann (2005) comments that such variation poses methodological concerns in two ways. Firstly, that the taxonomies originate from a relatively top down, grammatical, and category basis, and therefore have insufficient empirical basis. Secondly, the categorization is often based on the "linguist's semantic intuitions" (p. 86), which again is not empirically sound. Thus, more consensus and progression in the field to develop or refer to a widespread and empirically founded taxonomy would be a valid methodological contribution for teachers and students alike. In addition, this would provide the foundation for better and empirically grounded corpus-based studies, for which there are similar concerns.

2.3 Corpus studies: Variety of formulaic sequences in empirical research

As in the case of the previously mentioned taxonomies, corpus studies also demonstrate multiplicity in empirical research studies. Hence, there is inconsistent classification of formulaic sequences despite the empirical foundation of corpus studies. From the literature, Wood (2015) conducted a review of corpus data for formulaic sequences where four corpus studies of formulaic sequences carried out by four researchers in the field are presented: Liu (2012), Simpson-Vlach and Ellis (2010), Wood and Appel (2014), and Byrd and Coxhead (2010). In the review, formulaic sequences were isolated from sentences (not mentioned), and ordered in terms of the 30 most frequent formulaic sequences in descending order. Table 2 indicates the remarkable variation that exists among the established researchers in their attempts to establish frequency lists of formulaic sequences. For example, *As a result of* (in bold and italicized) is ranked 3, 16 and 22 in terms of frequency in three of the lists, yet is not included in the fourth. In addition, the four lists were created using considerably different extraction criteria and corpora, which can account for differences (Wood, 2015). Clearly, there is no common list of formulaic sequences even when more empirically sound corpora data is used. In the absence of such a list, to catalogue the most prevalent formulaic sequences in written

Table 2. *Most frequent formulaic sequences* (Adapted from Wood, 2015, pp. 109–116)

Frequency	Liu (2012)	Simpson-Vlach & Ellis (2010)	Wood & Appel (2014)	Byrd & Coxhead (2010)
1	Such as X	On the other hand	Shown/as/illustrated in figure #	On the basis of
2	For example	Due to the fact that	(Is/to) the number of	On the other hand
3	As X	On the other hand the	(Discussed) in the section #	***As a result of***
4	X suggest(s) that	It should be noted	(As) in example #	The end of the
5	According to X	It is not possible to	(Discussed) in chapter # (we)	At the end of
6	(Be) based on	A wide range of	The cost of (the)	At the same time
7	There be X	There are a number of	In this case (the)	The nature of the
8	There be no X	In such a way that	In terms of (the)	In the form of
9	A/the large/small number of	Take into account the	The amount of (the)	In terms of the
10	Out of X	As can be seen	(In) the United States (and)	In the absence of
11	One of X	It is clear that	(That) there is a	At the time of
12	X show(s) that	Take into account	(In) the direction of (the)	As well as the
13	Be/to be able to X	Can be used to	(Is) the sum of (the)	It is clear that
14	Focus on (X)	In this paper we	The fact that (the)	In the United States
15	(As) (a) part of X	Are likely to	(Is/as) shown in figure	That there is a
16	X argue(s) that	In the next section	***As a result (of/the)***	The way in which
17	In addition (to)	A large number of	The graph of (f/the)	Is likely to be
18	(Modal verb) Lead to X	The United Kingdom	With respect to (the)	It is possible to
19	The fact that X	On the basis of the	# Percent of (the)	It is important to
20	(be) Associated with X	That there is no	Is given by (the)	As part of the
21	In order to X	Over a period of	In other words (the)	In the same way
22	(be) Used to VP/in/as	***As a result of the***	The rate of (change)	That there is no
23	(to) Deal with (determiner + noun)	Can be seen in	As well as (the)	It is difficult to
24	Tend to VP	A wide range	(At) the end of (the)	The case of the
25	NP say that	There are a number	(#) We see that (the)	It is necessary to
26	The use of (determiner + noun)	It is interesting to	The price of (the)	As a result of the
27	In fact	It is impossible to	A and B (are)	A wide range of
28	Refer/(be) referred to (as) (determiner + noun)	It is obvious that	(Is) the same as (the)	The relationship between the
29	NP indicate that	It is possible to	(As/is) a function of	The rest of the
30	In + the name of a country/state/region (e. g., The U. S.)	It is not possible	The center of (mass/the)	The development of the

academic writing puts the research and researchers of this field in unchartered territory (Wood, 2015). More exasperating is that there is significant oversight when it comes to formulaic sequence empirical research, and this contributes to why they are rarely detected in language corpora (Cortes, 2004). For development in the research field, a universal taxonomy of formulaic sequences warrants further exploration.

3. Discussion

This paper aims to contribute to a foundation from which academic English writing teaching methodology in the research field of formulaic sequences can be progressed. When teachers teach formulaic sequences, students academic English written performance can be enhanced through decreasing the over or under usage of task appropriate formulaic sequences. However, at present there are challenges due to the variability in the field, which is hampering the progress of the pedagogy. This affects teachers and learners alike. Particularly, this is related to the issue of consensus in effective teaching methodologies in the L2 classroom. This taints the research in the field, thus empirical data design and collection have resulted in taxonomies which vary across established researchers in the field. Although the production of academic English writing for L2 learners is undoubtedly complex, this paper supports that if a prevalent approach to the development of classroom teaching methodologies based on empirical research can establish shared taxonomies and formulaic sequence corpus databases, teachers and learners would be better supported pedagogically. A key point to this argument is that academic English writing is not a creative paradigm but rather a formulaic one. Therefore, teaching methodology in the academic English writing classroom, if orientated towards formulaic sequences, can benefit novice learners. This is because successful academic writing is characterized by a high level of formal structure, and there are set expectations in terms of the types of words and structures required. Thus, setting lists or taxonomies of formulaic sequences and relevant to the paradigm, is pedagogic in academic English writing classes because the language required is rule-governed. Establishing such foundations, would also have a positive impact on formulaic sequence teaching instruction in writing programs. However, the literature is quite divergent in terms of how to incorporate them. Yet, since the aforesaid taxonomies constitute a key educational underpinning of the academic English writing paradigm, they should be further established in the methodology of this field to mitigate the present challenges.

4. Future Directions

Despite the formulaic paradigm of academic English writing, the progress towards a comprehensive approach to teaching methodologies, taxonomies, and corpus studies of formulaic sequences in academic English writing is protracted. As mentioned above, this is attributed to the nature of variability in L2 teaching methodologies, empirical research and data collection designs. However, to view formulaic sequences in isolation is not pedagogically

sound. Thus, teachers and learners need also to consider the rhetorical pattern outcomes in which they are working towards. This would enable better equivalences with the appropriate formulaic sequence sets to be utilized. To achieve this, it is necessary to orient formulaic sequence sets in writing instruction which are suitable to specific genre patterns. That is, genre can frame the writing task more effectively for teachers and learners alike. For example, argumentation in academic English essay writing. The foundation of what comprises argumentation needs to be taught, in addition to the appropriate formulaic sequences for the stages within this prescribed discourse. When the content of argumentation is combined with formulaic sequence teaching, the pedagogy can further be developed.

5. Conclusion

This paper has highlighted the importance of teaching formulaic sequences in English academic writing programs. This line of reasoning is taken from a section of a larger body of work by the author, which provides empirical data and specific guidance in terms of suggested pedagogic approaches for the classroom for increasing learner proficiency in academic English writing of formulaic sequences. However, this paper has only introduced the first phase of elucidating the importance of formulaic sequences for teachers of L2 learner English academic writing. This importance was outlined from the stances of teaching methodology and empirical research. In short, L2 learners need to be taught sets of formulaic sequences appropriate to rhetorical patterns. If they are not, their performance is rarely reflective of proficient academic written English. Moreover, L2 learners would continue to overuse more simple formulaic sequences, which are non-academic. This is considered an oversight stemming from teaching methodology and empirical research, especially when formulaic sequences are endemic to the formulaic paradigm of academic writing, as opposed to creative writing. Despite formulaic sequences being such important building blocks for writing academic genre patterns, this paper has shown that there are initial challenges in the field yet to be addressed. Specifically these were highlighted as differences in: teaching methodology in L2 environments of formulaic sequences, taxonomies of formulaic sequences and corpora development of formulaic sequences. Teaching methodology in the academic English writing classroom, if orientated towards formulaic sequences, can benefit novice (and proficient) learners. Therefore, taxonomies constitute a key educational underpinning of the academic English writing paradigm and further establishment in the field of them would mitigate against present challenges of learner proficiency and performance and the inconsistent research design and data collection within the field. In the final section of this paper, recommendations were made for how some of the aforementioned challenges could be addressed in terms of classroom methodology, taxonomies, and corpus study. Specifically for teaching methodology, to focus on the genre of the academic writing task within that rhetorical pattern, and investigating into a widespread taxonomy of the appropriate academic formulaic sequences to be taught by teachers to L2 learners to reach

this discourse outcome would be worth while. Here, the author believes, is the onset to the development of formulaic sequence teaching methodology and empirical research for better L2 learner performance in academic English writing.

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